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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,142	08/15/2001	Richard Edwin Harper	YOR920010068US1	8914

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EXAMINER
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MCCARTHY, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/929,142	<b>Applicant(s)</b> HARPER ET AL.	
	<b>Examiner</b> Christopher S. McCarthy	<b>Art Unit</b> 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al. U.S. Patent Application Publication US2002/0138786, as cited in prior office action, which was mailed on 10/12/2004.

2. Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (O'Reilly v. Morse, 56 U.S. (15 How.) 62, 112-14 (1853)), as cited in prior office action, which was mailed on 10/12/2004.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Chefalas et al. U.S. Patent Application Publication US2002/0138786.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

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CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Chefalas teaches a method of reducing warranty costs, comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in the computer system based on said indicators; and periodically storing said indicators prior to the problem or outage (0035,0036; figure 4).

As per claim 2, Chefalas teaches the method of claim 1, wherein said indicators comprise indicators of system software and hardware health (0035, 0036)

As per claim 3, Chefalas teaches the method of claim 2, further comprising: analyzing said indicators to determine whether the problem or outage was due to hardware or software, after the problem or outage occurs (0036).

As per claim 4, Chefalas teaches the method of claim 3, further comprising: presenting information regarding a cause of the problem or outage to a user of the computer system to prevent an unnecessary service call and hardware replacement (0036, 0031).

As per claim 5, Chefalas teaches the method of claim 1, further comprising: depending upon said determining of said hardware-induced problem or outage or said software-induced problem or outage, determining a manufacturer of said hardware or said software having undergone said problem or said outage (0036,0024,0004).

As per claim 6, Chefalas teaches the method of claim 1, wherein, in event of one of a hardware-induced problem or outage and software-induced problem or outage, pre-outage data is stored in a log file across the outage (0036), wherein, an event is interpreted to encompass a possible outage of a device.

As per claim 7, Chefalas teaches a method of reducing warranty costs associated with a computer system, comprising: monitoring indicators in a computer system; and, detecting a lack of performance of said computer system; discriminating whether said lack of performance was caused by a hardware-induced problem or a software-induced problem or outage based on said indicators; and periodically storing said indicators prior to the problem or outage (0035, 0036), wherein, lack of performance is inherent in the failure of an object in the system.

As per claim 8, Chefalas teaches the method of claim 7, further comprising: gathering pre-lack of performance data, said discriminating being performed based on said pre-lack of performance data (0036).

As per claim 9, Chefalas teaches the method of claim 7, further comprising: recovering from said lack of performance (0012).

As per claim 10, Chefalas teaches the method of claim 8, wherein said lack of performance comprises an outage, and in event of one of said hardware-induced problem or outage and said software-induced problem or outage, said pre-outage data is stored across the outage (0036).

As per claim 11, Chefalas teaches a method of reducing warranty costs, comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in said computer system based on

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said indicators; periodically storing said indicators prior to the problem or outage (0035, 0036); and based on said discriminating, reducing a duration of a service call and ensuring that a service technician has a correct part on hand at a time of repair (0035,0036,0004,0032).

As per claim 12, Chefalas teaches the method of claim 11, wherein said indicators comprise indicators of system software and hardware health (0036).

As per claim 13, Chefalas teaches the method of claim 12, further comprising: after the problem or outage, analyzing the indicators to determine whether the problem or outage was due to hardware-induced problem or outage or said software-induced problem or outage and which hardware or software subsystem was most likely a cause of the outage, and to produce information (0036).

As per claim 14, Chefalas teaches the method of claim 13, further comprising: presenting the information to a service technician of a computer system to replace or repair a faulty subsystem (0032,0004,0031).

As per claim 15, Chefalas teaches a method of reducing a trouble-shooting cost in a computer system, comprising: sampling system health data from a plurality of sources, and storing said data in a log; determining whether said outage event has occurred; and based on whether said outage event occurs, analyzing logged and other data to judge a likely cause of the event (0036).

As per claim 16, Chefalas teaches the method of claim 15, further comprising if the outage event comprises a software outage or problem, determining whether automatic recovery is possible, and if so, invoking an automatic recovery mechanism and notifying a customer or

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field support personnel that said software outage or problem is the cause of the event, and identifying a faulty subsystem for subsequent troubleshooting (0035,0031,0034).

As per claim 17, Chefalas teaches the method of claim 15, further comprising if the outage event comprises a software outage or problem, determining whether automatic recovery is possible, and if not, indicating that the event is due to said software outage or problem, and is not automatically recoverable, and notifying a customer or service technician to manually recover the fault (0035,0031,0034,0030).

As per claim 18, Chefalas teaches the method of claim 15, further comprising: determining whether the event comprises a software outage or problem and if not, determining whether a diagnosable hardware outage or problem exists (0035,0036).

As per claim 19, Chefalas teaches the method of claim 18, further comprising: if the event is judged to be caused by hardware, examining at least one of a hardware error log, an error register, and a hardware diagnostic, and attempting to localize a replaceable component that caused the event; informing a customer or a service technician that the outage was due to hardware; and manually recovering the hardware by replacing only defective hardware (0035,0031,0004).

As per claim 20, Chefalas teaches a computer node associated with a computer system, comprising: hardware for executing an operating system, at least one application program, and a system health monitoring program, wherein said system health monitoring program gathers system software and hardware health data from an application program, an operating system, and the hardware, and discriminates a cause of an event comprising at least one of a problem or

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outage of said computer node, and periodically stores said system software and hardware health data prior to the event (0024,0025,0012,0036,0035).

As per claim 21, Chefalas teaches the computer node of claim 20, wherein said computer node comprises sources of information for assessing software and hardware health (0035,0036).

As per claim 22, Chefalas teaches the computer node of claim 21, wherein said information is measured and logged prior to a failure event, and wherein said system health monitoring program monitors at least one of resource consumption data, system and application software error logs, system utilization and performance data, and software error counts (0035,0036).

As per claim 23, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program monitors at least one of concurrent diagnostics, hardware error logs, and hardware error counts, and wherein said system health monitoring program gathers information after the event, including at least one of error logs, crash dumps of memory, error codes, offline or power-on hardware diagnostics, and hardware error registers (0035).

As per claim 24, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes a log device for permanently storing a time history of system software and hardware health data, said log device being readable after an event to determine a likely cause of the event (0036,0037).

As per claim 25, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program includes an analyzer for analyzing the software and hardware health data (0035,0036).



As per claim 26, Chefalas teaches the computer node of claim 25, wherein said analyzer is run on the computer system that has experienced a problem, or on another execution environment (0035,0036,0012).

As per claim 27, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program comprises a notifier for notifying a customer or field service support personnel regarding a cause of the outage or problem, whether a service call is necessary, and where the likely cause of the outage or problem resides (0013,0031,0004,0035,0036).

As per claim 28, Chefalas teaches the computer node of claim 20, wherein said system health monitoring program samples a plurality of parameters, said plurality of parameters including at least one of: a parameter indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk; a parameter indicating a number of bytes that reside in said physical memory plus the paging files; a parameter indicating a number of errors that have been reported by transmission control protocol (TCP)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors (0037,0031).

As per claim 29, Chefalas teaches a system for use with a computer system, comprising: a software program for monitoring indicators in a computer (0035, 0036); an outage detector for detecting a problem or outage; a memory periodically storing said indicators prior to the problem or outage (0036); and a discriminator for discriminating whether said problem or outage was caused by a hardware component or a software component of said system (0036).

As per claim 30, Chefalas teaches the system according to claim 29, wherein, in event of an outage of one of said hardware and software, said periodically storing said indicators prior to the problem or outage are stored across the outage (0036).

As per claim 31, Chefalas teaches a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for reducing warranty costs, said method comprising: monitoring indicators in a computer system; and, discriminating between a hardware-induced problem or outage and a software-induced problem or outage in a computer system based on said indicators (0036,0035), wherein, a memory is inherent in the system in that is capable of storing an event log and a monitoring program; and periodically storing said indicators prior to the problem or outage (0035, 0036)..

As per claim 32, Chefalas teaches the method according to claim 1, wherein said indicators comprise indicators of said software health comprising at least one of resource consumption data, system and application error logs, system utilization and preference data, and software error accounts (0036).

As per claim 33, Chefalas teaches the method according to claim 1, wherein said indicators comprise indicators of said hardware health comprising at least one of concurrent diagnostics, hardware error logs, and hardware error counts (0035).

As per claim 34, Chefalas teaches the method according to claim 1, further comprising: continuously monitoring and storing indicators of system software health and hardware health after said problem or outage (0036), wherein the error log is continuously updated since the last error update process.

As per claim 35, Chefalas teaches the method according to claim 34, wherein said indicators monitored after said problem or outage comprise at least one of error logs, crash dumps or memory, error codes, offline or power-on hardware diagnostics and hardware error registers (0036).

As per claim 36, Chefalas teaches the method according to claim 1, wherein said monitoring comprises: sampling a plurality of parameters comprising at least one of: a parameter indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk; a parameter indicating a number of bytes that reside in said physical memory plus the paging files; a parameter indicating a number of errors that have been reported by transmission control protocol (Tcp)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors (0037, 0031).

As per claim 37, Chefalas teaches the method according to claim 1, wherein another execution environment is used to perform said monitoring (0012).

As per claim 38, Chefalas teaches the method according to claim 1, wherein said monitoring indicators in said computer system comprises monitoring said indicators prior to said problem or outage (0035, 0036), wherein the continuous error log of the system monitors the component and updates itself since the last error process update.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble must consist of a computer-readable medium storing computer-readable instructions, which are executable to perform the desired method. A signal-bearing medium is now deemed as a natural phenomenon.

### ***Response to Arguments***

3. Applicant's arguments filed 1/10/2005 have been fully considered but they are not persuasive.

The applicant argues that Chefalas does not teach periodically storing said indicators prior to the problem of outage or event. The examiner disagrees. Chefalas describes an on-going process of detecting a problem. In fact, figure 4 shows a step-by-step flowchart of the hardware log being queried/stored as each device is being queried (step 402) as compared to when the problem detection is performed (step 402). This shows clearly that the problem detection step is after the step of the querying and storing of the devices and the device drivers. This flowchart is further explained in paragraph 0035, as Chefalas teaches "At step 402, for each hardware resource on the list, the software agent performs a status check by polling or querying each device regarding its status of operations to determine if the device and associated device drivers are operating properly. If a problem is detected at step 404, the software agent records the problem at step 406 and continues processing other devices on the list at step 402 until the list is exhausted at step 408." As for the argument of periodically storing the data, Chefalas teaches in paragraph 0036, "Utilizing the list of software applications as a basis, at step 412, the software agent scans event and application logs for the software applications on the computing device

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201, 202, 204 or the like, to identify any events that were generated and logged by the software applications in the logs since a last run of the agent.” So, the logs are changed and therefore stored periodically every time the software does the above scanning of the devices. So this teaches the periodical storing of the indicators, as well as the prior storing thereof since the storing was performed at the prior scanning. In light of these arguments, all applicable rejected claims stand.

The applicant further argues that Chefalas does not teach invoking an automatic recovery process, as cited in claim 16. The examiner disagrees. Chefalas teaches in paragraph 0036, “At step 414, the software agent electronically transmits via communication network 206 the generated hardware and software lists along with the recorded problems to Web server(s) 214 for determination of solutions to the problems. At step 416, Web server(s) 214 compares each hardware or software item on the respective lists associated with a respective problem with its database of known problems and solutions, and transmits a set of possible solutions to the software agent.” The invocation of the recovery process is automatically done and the solution sent to the agent. In fact, Chefalas even teaches his system as being automated in paragraph 0024, “Preferably, the system architecture 200 of FIG. 2 is a client-server based environment, in which a customer uses a browser on any Internet-connected computing device, such as personal computer 201, internet-enabled copier or printer 202, or internet-enabled telephone 204 to connect via communication network 206 to a manufacturer Website (e.g., support location) 208 for receiving automated customer support according to the present invention.” The applicant argues in the Remarks of the present amendment that the present invention is “a fully automated solution... without any user intervention.” As cited in the prior office action arguments, this

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language is not present in the claims. In light of the above arguments, all applicable rejected claims stand.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (571)272-3651. The examiner can normally be reached on M-F, 9 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csm  
February 18, 2005

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